

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for implementing multiple functions in a device, said method comprising:

a) receiving configuration information into a configuration register of said device, said device comprising a plurality of analog blocks interconnected ~~coupled~~ in a single integrated circuit, wherein analog blocks in said plurality of analog blocks ~~comprising a first set of analog blocks that can be~~ are selectively and electrically couplable ~~coupled~~ to and decouplable ~~decoupled~~ from ~~another other~~ analog block blocks in said plurality of analog blocks, wherein said configuration information is for selectively and electrically coupling a particular combination of said analog blocks in a particular configuration according to an analog function to be performed; and

b) coupling electrically selected analog blocks according to said configuration information in said configuration register to achieve said analog function.

2. (Original) The method of Claim 1 comprising:
changing dynamically said configuration information to achieve a different analog function.

3. (Original) The method of Claim 1 wherein said configuration information in said configuration register is for specifying inputs and outputs of each of said analog blocks according to said analog function.

4. (Original) The method of Claim 1 wherein an analog block comprises a plurality of analog elements having changeable characteristics, wherein said configuration information in said configuration register is for specifying characteristics of said analog elements according to said analog function.

5. (Original) The method of Claim 1 wherein the step of receiving configuration information is performed during bootup of a system comprising said device.

6. (Original) The method of Claim 1 wherein the step of receiving configuration information is performed during program execution subsequent to bootup of a system comprising said device.

7. (Currently Amended) The method of Claim 1 wherein said plurality ~~first set~~ of analog blocks comprises switched capacitor blocks.

8. (Currently Amended) The method of Claim 1 wherein said plurality of analog blocks ~~also comprises a second set of analog blocks,~~
~~wherein said second set of analog blocks~~ comprises continuous time blocks.

9. (Original) The method of Claim 1 comprising:
storing an address for said configuration register in a register bank.

10. (Currently Amended) A method for configuring a device, said method comprising:

a) receiving configuration information into a configuration register of said device, said device comprising a first ~~an~~ analog block comprising a plurality of analog elements having changeable characteristics, wherein said configuration information is for specifying characteristics of said analog elements according to an analog function to be performed and wherein said configuration information is also for selectively and electrically coupling and decoupling said first analog block to and from a second analog block of said device according to said analog function; and

b) setting said characteristics of said analog elements according to said configuration register to achieve said analog function.

11. (Original) The method of Claim 10 comprising:

changing dynamically said configuration information to achieve a different analog function.

12. (Currently Amended) The method of Claim 10 wherein said configuration information in said configuration register is for specifying inputs and outputs of said first analog block according to said analog function.

13. (Canceled).

14. (Currently Amended) The method of Claim 10 wherein said first analog block is a switched capacitor block.

15. (Currently Amended) The method of Claim 10 wherein said first analog block is a continuous time block.

16. (Currently Amended) The method of Claim 10 wherein the step of receiving configuration information is performed during bootup of a system comprising said first analog block.

17. (Currently Amended) The method of Claim 10 wherein the step of receiving configuration information is performed during program execution subsequent to bootup of a system comprising said first analog block.

18. (Original) The method of Claim 10 comprising:
storing an address for said configuration register in a register bank.

19. (Currently Amended) The method of Claim 10 wherein said step b) comprises:
setting a bit in said configuration register to a first value to include a compensating capacitor when said first analog block is to perform a comparator function and to a second value to bypass said compensating capacitor.

20. (Currently Amended) The method of Claim 10 wherein said step b) comprises:

setting bits in said configuration register to specify a power level for said first analog block.

21. (Currently Amended) The method of Claim 10 wherein said step b) comprises:

setting bits in said configuration register to specify a resistance of a resistor in said first analog block.

22. (Currently Amended) The method of Claim 10 wherein said step b) comprises:

setting bits in said configuration register to specify a capacitance of a capacitor in said first analog block.

23. (Currently Amended) The method of Claim 10 wherein said step b) comprises:

setting a bit in said configuration register to change the phase of an input to said first analog block.

24. (Currently Amended) The method of Claim 10 wherein said step b) comprises:

setting a bit in said configuration register to select a clock phase for sampling an input to said first analog block.

25. (Currently Amended) The method of Claim 10 wherein said step b) comprises:

setting a bit in said configuration register to control a gated switch in said first analog block.

26. (Currently Amended) A method for configuring a device comprising a plurality of analog blocks coupled in a single integrated circuit, said method comprising:

a) receiving configuration information into a configuration register of said device, wherein said configuration information is for causing a first ~~an~~ analog block of said device to be selectively and electrically coupled to a second ~~another~~ analog block of said device according to an analog function to be performed, said configuration information also for specifying analog characteristics of said first and second analog blocks ~~block~~ and for selecting inputs and outputs of said first and second analog blocks ~~block~~; and

b) changing dynamically said configuration information to effect a change to said analog function.

27. (Original) The method of Claim 26 comprising:

coupling electrically first selected analog blocks according to first configuration information in said configuration register to achieve a first analog function;

setting characteristics of said first selected analog blocks according to said first configuration information to achieve said first analog function;

changing in said configuration register said first configuration information to second configuration information;

coupling electrically second selected analog blocks according to said second configuration information to achieve a second analog function; and
setting characteristics of said second selected analog blocks according to said second configuration information to achieve said second analog function.

28. (Original) The method of Claim 27 further comprising:
selecting inputs and outputs of each of said first selected analog blocks according to said first analog function; and
selecting inputs and outputs of each of said second selected analog blocks according to said second analog function.

29. (Currently Amended) The method of Claim 26 wherein said plurality of analog blocks comprises ~~comprise~~ switched capacitor blocks and continuous time blocks.